



***Montana Fish,
Wildlife & Parks***

Decision Notice for Draft EA: Temporary Wild Fish Transfer and Containment to Test eDNA Sampling Techniques

Prepared by:
Montana Fish, Wildlife and Parks
Region 2 Wildlife
3201 Spurgin Road
Missoula, MT 59804
May 8, 2015

DESCRIPTION OF PROPOSED ACTION

Montana Fish, Wildlife & Parks (FWP) proposes to complete controlled environmental DNA (eDNA) sampling experiments in stream segments (above natural barriers to upstream fish movement) where the transported species (bull trout and/or westslope cutthroat trout) are known to be absent. Stream segments proposed in the Draft Environmental Assessment (EA) include upper sections of Deer Creek, Morrell Creek and Lolo Creek. Once testing is completed, fish would be returned to their natural place of origin downstream of enclosure sites. These experimental trials would be conducted in conjunction with researchers at the U.S. Forest Service (USFS) Rocky Mountain Research Station.

Environmental DNA essentially consists of genetic material from cells that are naturally shed by living aquatic organisms. Because different organisms have unique DNA, geneticists can identify if target species are present in a water body by looking for specific segments of eDNA. In this technique, water samples are collected from streams, rivers or lakes, and laboratory analyses are completed to determine if specific species (in this case, bull trout and westslope cutthroat trout) are present in the water body sampled.

FWP is assisting the USFS Rocky Mountain Research Station in developing standard eDNA sampling protocols and refining sampling techniques. In order to effectively test and evaluate this technique, live native trout would be transported from downstream stream reaches and temporarily held within enclosure cages in reaches of that stream that are above natural physical barriers and are where the transported species is known to be absent. This technique would be tested on up to three separate streams in Missoula County: Deer and Morrell Creeks near Seeley Lake, and Lolo Creek west of Lolo. Refinement of this technique is a critical step in developing a fisheries sampling tool that would likely become a standard technique for FWP fisheries biologists and other professionals in Montana.

Safeguards and mitigation measures include construction of fish enclosures that ensure transported captive fish would not escape into fishless reaches; this is essentially a reinforced, locked cage-within-a cage design with undersized mesh that ensures fish cannot exit and predators cannot reach captive fish. Only native trout species would be used in trials, and only individuals captured within the same watershed. In addition, standard protocols would be followed to ensure that unwanted pathogens (e.g., fish diseases) are not transported into upstream test reaches. Fish used in trials would be transported in covered adequately sized containers at water temperatures <12° C to minimize stress and the possibility of handling mortality.

ALTERNATIVES CONSIDERED TO THE PROPOSED ACTION

No Action: FWP would not transfer or hold wild fish in currently fishless reaches. Experiments testing eDNA sampling techniques would be conducted in current fish-bearing reaches where test species are already present and standard FWP sampling protocols would apply.

This alternative is less desirable because DNA from individuals in enclosures cannot be distinguished from DNA from individuals naturally inhabiting the stream outside the enclosures. Uncontrolled movement and presence of test species throughout study sections would confound results of eDNA collection and make it extremely difficult to implement an effective study design.

MONTANA ENVIRONMENTAL POLICY ACT PROCESS

FWP is required to assess impacts to the human and physical environment under the Montana Environmental Policy Act (MEPA). The proposal and its effects--related to the temporary wild-fish transfer and containment to test eDNA sampling techniques--were documented by FWP in a Draft Environmental Assessment (EA).

PUBLIC REVIEW PROCESS

FWP is required by MEPA to assess potential impacts of its proposed actions to the human and physical environments, evaluate those impacts through an interdisciplinary approach, including public input, and make a decision based on this information. FWP released the draft EA for public review of this proposal on April 2, 2015 and accepted public comment through May 5, 2015. This comment period was more than 30 days.

Legal notice of the proposal and availability of the Draft EA was published once each in the *Independent Record* (Helena, April 3), *Missoulian* (April 3), and *Seeley Swan Pathfinder* (April 9) newspapers.

FWP mailed 8 copies of the EA, and emailed approximately 33 notifications of the EA's availability, to adjacent landowners, interested individuals, groups and agencies. The EA was available for public review and comment on FWP's web site (<http://fwp.mt.gov/>, "Recent Public Notices" and "Submit Public Comments") from April 2 through May 5, 2015.

SUMMARY OF PUBLIC COMMENT

FWP received no comment during the public comment period.

FINDING OF NO SIGNIFICANT IMPACT

FWP has reviewed the EA and applicable laws, regulations, and policies and has determined that this action will not have significant effect on the human environment. Therefore, I conclude that the EA is the appropriate level of analysis and the preparation of an Environmental Impact Statement is not necessary.

DECISION

Based on the analysis in the Draft EA and lack of public comment opposing or suggesting changes to the Proposed Action, I have selected the “Proposed Action” alternative. FWP will complete controlled eDNA sampling experiments in conjunction with the USFS Rocky Mountain Research Station. Experiments will occur in stream segments above natural barriers to upstream fish movement, where the transported species (bull trout and/or westslope cutthroat trout) are known to be absent. Prospective test sites will be upper sections of Deer Creek, Morrell Creek, and Lolo Creek.

CONCLUSION

By notification of this Decision Notice, the draft EA is hereby made the final EA. The finding of selection for the “Proposed Action” alternative is the product of this Decision Notice.



Randy Arnold
Regional Supervisor
Montana Fish, Wildlife and Parks
3201 Spurgin Road
Missoula, MT 59804

5/8/2015

Date